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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,912	12/24/2003	Shinichiro Godo	0038-0422P	9184
2292	7590	11/29/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH			PHAM, LEDA T	
PO BOX 747			ART UNIT	
FALLS CHURCH, VA 22040-0747			PAPER NUMBER	

2834

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/743,912	Applicant(s) GODO ET AL.	
	Examiner Leda T. Pham	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/24/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/24/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/24/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Preliminary Amendment

1. Preliminary Amendment filed on 12/24/03 has been entered and made of record in the file.

Claims 1 – 4 are presented for examination.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because the abstract has legal phraseology "comprising". Correction is required. See MPEP § 608.01(b).

Claim Objections

4. Claim 1 is objected to because of the following informalities: "radially" on line 5 of claim 1 is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the

Art Unit: 2834

invention. In this claim, “a ring-shaped stator core provided on the same” is indefinite because it is unclear how the stator core provided *on the same*. Does applicant mean that the stator core provide on the same surface of the base plate where the circuit board mounted on? If this is the case, please rewrite the claim language to make the subject matter clearly understand. “The main core is constituted by piling a plurality of first core plates, which respectively have first extended pole sections of the same number” is indefinite because it is unclear at “first extended pole sections of the same number”. What is *the same number*? Does “the same number” is a specific number? Does applicant recite that each of first core plate having the same number of first extended pole sections? If this is that case, please rewrite the claim language. “the base plate side of the main core” on line 12 of the claim is unclear because in light of specification the sub core is provided on the lower side of the main core and above the surface of base plate. Therefore, where is the base plate side? The base plate side of the main core has to recite in the specification and the drawing in order to understand the subject matter. On line 14 of the claim, the “number” is indefinite because what is that number? Does applicant mean the number of second extended pole sections? If so, please clearly rewrite the claim language in the claim to recited the number of second extended pole sections is less than the number of the first extended pole sections.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2834

1. Claims 1 – 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Utsumi (U.S. Patent No. 6,661,150 B2) in view of Morita (U.S. Patent No. 5,668,427).

Referring to claim 1, Utsumi teaches a motor (figure 1), comprising:

a stator including a base plate (11),

and a ring-shaped stator core (17) provided on the same and having stator magnetic poles (18), which are radially outwardly extended from the stator core (17) and on which coils (19) are respectively formed; and

an outer rotor (14) being rotatably provided on the base plate (11) and having rotor magnets (15), which face the stator magnetic poles (18),

wherein the stator core comprises a main core (17-1 to 17-3) and a sub-core (17-5),

the main core is constituted by piling a plurality of first core plates (17-1, 17-2, 17-3), which respectively have first extended pole sections of the same number, and

the sub-core (17-5) is provided on the base plate side of the main core and constituted by at least one second core plate.

However, Utsumi does not teach a circuit board provided on the base plate and the sub-core has second extended pole sections whose number of second extended pole sections is less than that of the first extended pole sections of each of the first core plates.

Morita teaches a spindle motor having a circuit board (47) provided on the base plate (27) and the sub-core (50b) has second extended pole sections (56) whose number of second extended pole sections is less than that of the first extended pole sections (54) of each of the first core plates (50a, figure 13a-b) for reducing the thickness of the stator in spindle motor.

Thus, it would have been obvious to one having skill in the art at the time the invention was made to produce a stator core with two different stator cores stacking together where the number of extended pole sections of one stator core is smaller than the number of extended poles sections of the other stator core as taught by Morita. Doing so would reduce the thickness of the stator in spindle motor, and the torque characteristics of the spindle motor can be largely improved without changing the entire height of the spindle motor.

Referring to claim 2, Utsumi teaches the motor wherein the second extended pole sections (17-5) of the second core plate are symmetrically arranged with respect to a center line passing one of the stator magnetic poles of the stator core (figure 2).

Referring to claim 3, Utsumi teaches the motor wherein the base plate (11) has a plurality of through-hole (20) for ventilation, the through-holes are arranged in the circumferential direction with regular separations, and the second extended pole sections (17-5) of the second core plate corresponds to the through-holes (figure 1).

Referring to claim 4, Utsumi teaches the motor wherein the second extended pole sections (17-5) of the second core plate are symmetrically arranged with respect to a center line passing one of the stator magnetic poles of the stator core (figure 2).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leda T. Pham whose telephone number is (571) 272-2032. The examiner can normally be reached on M-F (8:30-6:00) first Friday Off.


Art Unit: 2834

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leda T. Pham
Examiner
Art Unit 2834

LTP
November 19, 2004


DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800